[4310-55]

Title 50—Wildlife and Fisheries

CHAPTER I—UNITED STATES FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

Deregulation of the Mexican Duck

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines that the Mexican duck (*"Anas diazi"*) is not in danger of extinction or likely to become endangered so as to be endangered or threatened as defined in the Endangered Species Act of 1973. Therefore, this species is removed from the list of endangered and threatened wildlife and plants. This action is being taken after careful review of the best available scientific data. Mexican-like ducks found within the United States will remain under the effective management and conservation provisions of the Migratory Bird Treaty Act of 1918. The Service finds (1) no population of Mexican ducks or mallard X Mexican ducks intergrades have any threat to their continued existence, (2) bases on recent information, the original reasons for the 1967 listing of *"Anas diazi"* are now known to have been incorrect, and (3) a more appropriate level of protection can be provided under the Migratory Bird Treaty Act of 1918 than under the Endangered Species Act of 1973.

DATE: This rule becomes effective on August 24, 1978.

FOR FURTHER INFORMATION CONTACT:

Mr. Keith M. Schreiner, Associate Director—Federal Assistance, U.S. Department of the Interior, Washington, D.C. 20240, 202-343-4646.

SUPPLEMENTARY INFORMATION:

BACKGROUND

On November 28, 1977, the Service published in the FEDERAL REGISTER (42 FR 60579-60580) a notice of status review of the Mexican duck. A proposal to deregulate the Mexican duck pursuant to the Endangered Species Act of 1973, 16 U.S.C. 1531 et seq., was published March 31, 1978 (43 FR 13592-13594). That proposal summarized the factors that had led the Service to list the Mexican duck in 1967 under the Act of October 15, 1966 (80 Stat. 926). A summary of the most current (January 1978) information was also presented to indicate that sufficient evidence was then on file to support the proposal for the deregulation of this duck. That proposal summarized the five criteria for section 4(a) of the act as they pertained to the Mexican duck, specified the effects of deregulation, and solicited comments, suggestions, objections, and factual information from interested persons. Section 4(b)(1)(A) of the act requires that the Governor of each State or Territory within which the native species of wildlife is known to occur be notified and be provided 90 days to comment before any such species is determined to be endangered or threatened or removed from the list. Letters were sent to the Governors of Arizona, New Mexico, and Texas on December 5, 1977, conveying the notice of status review and on April 7, 1978, for the proposed rulemaking. All public comments received by June 20, 1978, were considered by the Service along with all reports, publications, and other documentation on the Mexican duck. Twenty-one comments to the proposal were received from 3 States, 3 other Federal agencies, and 15 citizens or private organizations.

SUMMARY OF COMMENTS

Arizona, New Mexico and Texas supported the proposed deregulation of the Mexican duck. Various reports were provided by these States on surveys and other field work conducted by their biologists over the past few years. The U.S. Forest Service and the Bureau of Reclamation also supported this proposal. The latter agency stated "* * * this action is in the best interest of maintaining an up-to-date and accurate listing of threatened and endangered species." The Arizona Wildlife Federation, Douglas Sportsman's Club and Safari Club International also supported this measure, as did several members of Women Involved in Farm Economics. Dr. John Aldrich (Washington, D.C.) supported the proposal and, based upon current information, wrote "* * * that the statement on the status of the Mexican Duck which I prepared for the 'Red Book' (Committee on Rare and Endangered Wildlife Species, Etc., 1965, 1966), and which was the basis for the original Interior Department listing of the Mexican Duck as 'endangered', is [now] unjustified." The above statement referred to in the "Red Book" was as follows: "Endangered because of drainage of suitable marsh habitat *throughout range* and hybridization with Common Mallard in the United States" (emphasis added). Drs. A. G. Canaris (University of Texas at El Paso) and L. L. Short (American Museum of Natural History, New York) both supported the proposal. Dr. Short, a recognized world expert on avian hybridization and speciation, also noted the problem the Service would have in trying to maintain purity of strains or subspecies around the world that were naturally interbreeding with other forms of the same species (conspecifics). The Service recognizes that situations where two conspecific subspecies of animals naturally interbreed are of very common occurrence throughout the world.

The Bureau of Land Management did not concur with the Service's proposed action. That agency believed that the Service's rationale required additional support for the position maintained by various ornithologists that *diazi* is a subspecies of *platyrhynchos*. The Service did investigate other scientific methods of corroborating Dr. Hubbard's work that was cited in the proposal as background. First, as background, several other waterfowl taxonomists had proposed as early as 1956 that the Mexican duck was a subspecies of the common mallard. However, until 1977 no large scale, in-depth analysis of hybridization in these ducks had been published. The American Ornithologists' Union's Committee on Classification and Nomenclature of North American Birds did not have sufficient data and an accompanying analysis until late 1977 to adequately judge the situation.

Dr. Hubbard's method of using a "hybrid index" is a well recognized statistical method for analyzing hybridization. Finally, the Service found that all presently known methods of karyotyping, allozymic variation analysis, and protein analysis would not provide sufficiently reliable insight as to the taxonomic relationship between *diazi* and *platyrhynchos*. Most of these methods have great difficulty in separating congeneric, let alone conspecific, taxa.

The Bureau of Land Management also cited two earlier (1970) papers on Mexican ducks as being in contradiction with Hubbard's findings. One of these was by Dr. Aldrich, whose more recent opinion is summarized above. The other paper cited was an unpublished master's thesis at New Mexico State University. That thesis (as in many other papers known to the Service) reported visual field observation as the basis for estimating the percentage of "pure" versus "hybrid" nesting ducks in the southwestern United States. Dr. Hubbard's study has shown that these ducks are difficult to identify correctly even in the hand, let alone through telescopes or binoculars. All reports of observations of "Mexican ducks" in the United States and northern Mexico must now be interpreted to be of only "Mexican-like ducks". (The term "Mexican-like duck" refers to the duck typically

found from northern New Mexico to southern Durango that at least superficially resembles pure *Anas platyrhynchos diazi*.) Finally, the Bureau urged the Service to provide additional data so that it could support the Service's proposal. We have provided a sufficient summary, in our view, of these data in this final rulemaking. Further supporting documentation to these summaries is available upon request.

The Fund for Animals (fund) strongly objected to the proposed action by the Service. The central theme of the fund's objection was that the Mexican duck would not be afforded any further protection under the Act. The Service contends that this duck would not have been listed in 1967, if the data now available had been known then. The Service also pointed out in the proposal that these ducks would still be federally protected, conserved and managed in the United States by the Migratory Bird Treaty Act of 1918 (40 Stat. 755; 16 U.S.C. 707-711). The level of protection afforded these ducks under the Endangered Species Act is not warranted.

Several other points were raised by the fund. Their letter indicated that there was an unfounded "claim that the species has recovered sufficiently to be considered out of danger * * *." The fund repeatedly referred to the estimated 100 phenotypically pure Mexican ducks in the United States as being a "population" worthy of protection. The term "phenotypic" was also misinterpreted or ignored in some statements by the fund in claiming that a number of "pure Mexican ducks" still existed in the United States. The fund also stated that habitat changes had been made by agricultural interests in violation of the Endangered Species Act of 1973. The hybridization with the common mallard "especially," was cited by the fund as the "major factor in the decline of the Mexican ducks." Pressure from hunting interests was alleged by the fund to be the major force in the Service's actions in this matter. In their summary, the fund stated "* * * the plight of the Mexican ducks has worsened, not improved, in recent years." The fund's position was supported by 12 other organizations belonging to Monitor.

The Service responds to the above specific points as follows: First, the Act defines a species under section 3 as:

> The term "species" includes any subspecies of fish or wildlife or plants and any other group of fish or wildlife of the same species or smaller taxa in common spatial arrangement that interbreed when mature.

Phenotypes are not, under this definition, permitted to be listed. Otherwise, member of the cinnamon phases of the black bear (*Ursus americanus*), blue phases of the lesser snow goose (*Chen caerulescens caerulescens*), or "Baltimore" orioles found in the zone of intergradation between that subspecies (*Icterus galbula galbula*) and the western "Bullock's" orioles (*Icterus galbula bullockii*) could all be candidates for listing because of their rarity in some segments of those species' populations. Phenotypes, such as the "Mexican ducks" in the United States., are not interbreeding solely among themselves, since they are only identifiable segments of the entire population, just as brown-eyed and blue-eyed individuals are phenotypic segments of the human species.

The three phenotypes found in the zone of intergradation (see map, 43 FR 13593) are the two parental forms (*Anas platyrhynchos platyrhynchos* and *Anas platyrhynchos diazi*) and the intergrade form. In the 1960's the New Mexico Department of Game and Fish attempted to propagate and release pure Mexican ducks from what they thought were genotypically pure stock from the United States and Mexico. This stocking program was abandoned when the offspring of such matings showed obvious hybrid characteristics. The Service now estimates that there is only a very remote possibility (perhaps 1 in 10,000 or 100,000) that any genotypically pure Mexican ducks are present in the United States or northern Chihuahua, Mexico. Such individuals would only be the result of chance recombination of genes from non-genotypically pure parents.

The Service has no data demonstrating a decline in the total United States or Mexican populations of the Mexican ducks or the hybrids. On the contrary, data now available shows at least a stable population in most areas and an increase in overall distribution of these ducks in Arizona and Texas. In a May-June 1978 survey conducted by the National Audubon Society the total minimum population of Mexican and Mexican-like ducks was estimated to be 55,500 in Mexico. These ducks were most commonly found in agriculture areas, which again demonstrates the adaptability of this duck to changing environments.

The interbreeding between the common mallard and the Mexican duck has, by all reliable estimates, been taking place for many hundreds, if not thousands, of years. The zone of interbreeding was restricted to the narrow band of habitat along the Rio Grande in New Mexico and western Texas prior to agricultural practices by man, particularly in the first half of this century. These activities reduced the natural wetlands but increased the available food supplies and created new, artificial wetlands. The Mexican and Mexican-like ducks in the United States and Mexico began using these small impoundments and irrigation ditches. The Service knows of no water projects or other activities started or completed since passage of the present act that may have adversely affected these ducks or their habitats. The ducks nesting from northern New Mexico to Chihuahua have always been uncommon simply because of the general lack of sufficient water.

The Environmental Defense Fund (EDF) strongly opposed the Service's proposed deregulation of the Mexican duck based largely on the legal precedent it would, in their view, establish. EDF made some thoughtful statements that the Service also agrees should be a part of the policy of the endangered species program. Their letter stated "that other conspecific subspecies may be abundant, even extraordinarily abundant, is simply irrelevant, as a legal matter, to the question whether the Mexican duck subspecies (or some population thereof) should be considered endangered." EDF incorrectly assumed that the Service was implying in the proposed action that, because of the abundant population of mallards (estimated in North America to be about 9 million birds in May 1978), the Mexican duck subspecies was not worthy of protection under the act. One has only to carefully examine the entire list of endangered and threatened wildlife and plants (42 FR 36420-36431, July 14, 1977) to find abundant examples of subspecies being listed where other conspecific subspecies are not. The latter are frequently very abundant; the former are threatened with extinction or becoming endangered. The Service considered the threats to just the intergrade population of Mexican-like ducks (including the resident nesting mallards) from northern New Mexico to Chihuahua and Durango. After an extensive search, the Service could find no evidence of threats to the continued existence of this population of ducks. On the contrary, a stable or increasing population with an expanding range was well documented.

The EDF also raised the question of the red wolf (*Canis rufus*) compared to the Mexican duck. The wolf population in the southern United States was greatly reduced first by man's activities. It is now being further threatened by genetic swamping from both coyotes (*Canis latrans*) and stray dogs (*Canis* sp.). The population density of any surviving wolves has been so low that these animals are now forced to select other more abundant and related species for mates. This is not the

case with the ducks under discussion here. The definitions of subspecies and species used by most zoologists includes the concept of "freely interbreeding individuals." Dr. Hubbard's study shows that there have not been any reproductive isolating mechanisms established between the mallard and Mexican duck. Subspecies in contact with other conspecifics will always freely interbreed, otherwise they would not be considered conspecific.

A further concern expressed by EDF was that the Service would not protect U.S. segments of a species (or subspecies) that was relatively abundant outside the United States. EDF then cited the listing of several animals as indicators of the existence of such a policy by the Service. The Everglade kite (*Rostrhamus sociabilis plumbeus*) was one example cited. This subspecies is restricted to Florida. The endangered American crocodile (*Crocodylus acutus*) is only listed for Florida. The discrete U.S. population is separated by the Florida Straits from any significant genetic influence from the rest of the crocodile population. The listing of the gray wolf (*Canis lupus*), as well as the bald eagle (*Haliaeetus leucocephalus*) and the grizzly bear (*Ursus arctos horribilis*), involve remnants of once large and wide-ranging populations. The Service interprets the act as not being applicable to listing a "population" of a few pairs of a species (or subspecies) that have only a peripheral range in the United States.

That the Mexican duck in central Mexico has survived in such numbers as are now indicated is impressive. The ducks are very adaptable to man's agricultural practices throughout their range. No evidence of threats from hunting or habitat loss have been found for any significant portion of the Mexican duck or mallard X Mexican duck populations.

Several individuals expressed opposition to the Service's proposal. Dr. F. R. Gehlbach (Waco, Tex.) cited four reasons for opposing this action: (1) Increase in incidence of intergradation "* * * due to the activities of man in historic time," (2) populations of intergrades and hybrids are valuable to science, (3) decreasing numbers of intergrades in the U.S. from habitat losses, and (4) the preservation of the U.S. populations as "* * * extraordinary fine, natural laboratory examples of how man modifies natural gene pools." The Service recognizes the scientific value of preserving populations of naturally interbreeding subspecies or species. However, to be listed under the Act, that population (and not just one phenotype) must meet the criteria of Section 4(a) as summarized in the proposal. The Service has no data, nor was any documentation reported by Dr. Gehlbach or any other commentor on this proposal, to show a significant increase in mallards or intergrades or a significant decrease in Mexican-like ducks over any given time period. The first U.S. specimen of a Mexican-like duck was an intergrade collected in 1893 at El Paso, Tex. Modifications of gene pools as a result of man's activities have been well documented in several other bird groups in the Great Plains. Eastern and western woodland species have come into extensive contact with their counterparts in the new woodlands planted by man in the former prairies. The Service does not consider those interbreeding bird populations as candidates for listing under the Act because of the man-related changes in their specific gene pools.

Mr. Tony Gallucci (Alpine, Tex.) opposed the proposal on the basis, in part, that Dr. Hubbard's study presented little data on Texas Mexican-like ducks. He correctly pointed out that Presidio County, Tex., has one of the largest concentrations of Mexican-like ducks in the United States and that those birds are probably the purest population in the United States. Purity of these ducks is not of concern to the Service in this case, only the threats, if any, to the continued existence of the whole intergrade population, or any significant portion thereof.

Another individual, Richard M. Kerr (Littleton, Colo.), cited past Federal and State actions to protect and manage the Mexican-like ducks in the United States based upon an "erroneous" listing made in 1967. He felt that the Service's proposed action would nulify those past actions to benefit the ducks and, perhaps in some cases, could cause suits to be filed against these Federal or State agencies about those past actions. The best scientific data available in 1967 clearly supported listing *"Anas diazi"* as endangered. However, more recent data and analysis of the status of these ducks has definitely changed those veiws held 10 years ago. The Service acknowledges that a large amount of time, money, and effort has been spent in the past on behalf of the Mexican duck by Federal, State, and private organizations. However, this past level of conservation effort, by itself, does not meet any of the Act's factors for continued classification as endangered (or threatened). In fact, the Service must respond to the wealth of evidence on the current status of this duck which was generated by the attention given it while thought to be endangered.

Dr. W. A. Davis (Tucson, Ariz.) objected to the Service's proposal because he believed some of the current data considered by the Service was erroneous. In particular, he cited the ratio of integrades to "pure" Mexican ducks in Cochise County, Ariz., as reported by himself, and, separately, a graduate student. As the Service has noted in this summary of comments, positive identifications of "Mexican ducks" in the United States are not possible unless the birds are in hand, and even then birds that phenotypically resemble Mexican ducks are almost certainly not genotypically pure. Visual observations, such as those reported by Dr. Davis, cannot be used to determine ratios or degree of intergradation. Such observations do demonstrate that the occurrence of males of the common mallard phenotype decreases rapidly as one proceeds southward into Chihuahua, Mexico.

Conclusion

The Service has summarized and responded to all substantive comments received on this proposal as accurately and completely as possible. In an effort to insure that the public record is clear on the reasons the Service takes this final action, a summary of the most important points is given below:

(1) *Anas platyrhynchos diazi* has been recently determined by ornithologists to be a subspecies of the common mallard (*Anas platyrhynchos*). A large zone of intergradation between these two subspeicies exists from northern New Mexico to southern Durango, Mexico. In this region, annual precipitation levels are the lowest for any segment of the geographical distribution of either of the two subspecies and range from 6-12 inches per year, versus 12-35 inches per year north and south of this zone. Consequently, there are fewer wetlands—natural or man made—in this zone. The overall population of ducks in this zone in May 1978 is conservatively estimated at 5,000. The phenotypes in this zone are: mallard, mallard X Mexican duck intergrade, and Mexican duck. No evidence of any threats, as required in section 4(a) of the Act, were found as to the continued existence of this mixed population, or a significant segment of it. In fact, the population, at least in the United States is expanding its historical range into southeastern Arizona and western Texas.

(2) Apparently *genotypically* pure populations of *diazi* are found only in the central highlands of Mexico. A survey in May-June 1978 indicated a population in excess of 50,000 birds was present just prior to the nesting season. These ducks are also adapting to local agricultural practices, as in the United States, by feeding extensively in local farmlands. The ducks in this area, as elsewhere, are very wary and not easily approached. No threats

to the continued existence of this population of ducks, or any significant segment of it, has been documented.

(3) The present information now available indicates that the loss of habitat throughout its range and hybridization with the mallard are no longer valid reasons for listing as was thought in 1967. The effect of natural habitat losses on these ducks has been found to be negligible, since the birds have readily moved into agricultural areas where surface water and food supplies are sometimes more consistently available. The interbreeding of two subspeices of the same species is an expected natural phenomenon. Protection under the definition of "species" in the Act for one phenotype in a geographic segment or population of the same species is not permissible.

After a thorough review and consideration of all information available, the Director has determined that neither the Mexican duck nor its intergrade population with the common mallard is threatened with becoming endangered or in danger of becoming extinct throughout all or a significant portion of its range under any of the five factors described in section 4(a) of the Act, as summarized in the proposed rulemaking (43 FR 13592-13594) and above.

EFFECTS OF THE RULEMAKING

The Mexican-like ducks in the U.S. will remain protected, be more appropriately managed, and receive conservation benefits from the Migratory Bird Treaty Act of 1918. Populations and environmental changes will continue to be closely monitored both in the U.S. and Mexico under the Service's migratory bird program. Benefits, such as State cooperative agreement funding for further research, and protection, such as provided by sections 7 and 9, will no longer be afforded the Mexican duck under the Endangered Species Act of 1973.

EFFECT INTERNATIONALLY

In addition to this action, the Service presently intends, by October 15, 1978, to send to the Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora a proposal to remove the Mexican duck from appendix I to that Convention. This proposal is contingent upon comments received to the Service's advance notice of potential rulemaking in the May 3, 1978, FEDERAL REGISTER (43 FR 19176-19190).

NATIONAL ENVIRONMENTAL POLICY ACT

An environmental assessment has been prepared and is filed in the Service's Washington Office of Endangered Species. This assessment addresses this action as it involves the Mexican duck and is the basis for the decision that this determination is not a major Federal action which would significantly affect the quality of the human environment within the meaning of section 102(2)(C) of the National Environmental Policy Act of 1969.

The primary author of this rule is Jay M. Sheppard, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240, 202-343-7814.

REGULATIONS PROMULGATION

Accordingly, § 17.11(i) is amended by deleting the Mexican duck ("*Anas diazi*") from the list of endangered and threatened wildlife.

NOTE.—The Service has determined that this document does not contain a major proposal requiring preparation of an economic impact statement under Executive Order 11949 and OMB Circular A-107.

Dated: July 19, 1978.

LYNN A. GREENWALT,
Director,
Fish and Wildlife Service.

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